ROLE OF INTENSIVE USAGE OF MOBILE BASED SOCIAL MEDIA IN HEALTH-RELATED PHYSICAL FITNESS AND ACADEMIC PERFORMANCE AMONG THE HIGHER SECONDARY STUDENTS

A
RESEARCH PROPOSAL

SUBMITTED TO THE
SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY
NANDED

FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
IN PHYSICAL EDUCATION

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December, 2019

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1.0 INTRODUCTION

Presently, mobile phones are being used everywhere because these devices do not use the physical cable/wire that is demanded for the communications purposes. Their demand for the electromagnetic radiation for receiving and transferring the data in the air; either it is a network or a sound data. These mobile phone devices give off harmful radiations which effects to the human health because such type of radiations is available everywhere and their existence cannot be felt. In fact, Social media (SM) is the fastest growing web application in the 21st century. The diverse applications of SM like Wikis, video streaming and applications, and social networks make it the phenomenon of the century. Facebook counted users topped all social media applications with over 955 million users in 2013, followed by Twitter with 500 million users (www.thecountriesof.com).

Over the past decade, regular use of social media by young adults has increased considerably from 89% in 2014 to 97% in 2016 (Villanti *et al*., 2017). Villanti and colleagues also reported that young adults used an average of 7.6 social media sites regularly, with 85% of them using 6 or more sites regularly (Villanti *et al*., 2017). Adolescents' time spent on social media has also more than doubled from 4.4 hours weekly in 2007 to 11.1 hours in 2011. Adolescents are more likely than any other age group to use social media. In 2013, approximately 45% of adolescents in the United States used social media sites daily and, among those, 73% used it to connect with their peers (Duggan *et al*.,2015). This extensive use of social media during the formative years calls into question the extent of its influence on all aspects of development, including physical and mental health. An emerging body of evidence shows both positive and negative influences of social media use on adolescents' health and health behaviors (Bruni *et al*., 2015; Vaterlaus *et al*., 2015). The benefits of social media use include exposure to new ideas and information and raising awareness of current events and issues. The interactive nature of social media can provide opportunities to engage with

peers on issues, access support networks, and improve social inclusion; it may also foster healthy eating habits. However, there are notable negative health outcomes associated with social media use among adolescents. Higher levels of social media use among this population are associated with lower levels of participation in sports activity, less happiness, and more socioemotional difficulties (Booker *et al*., 2015). Smartphone or mobile phone use at night is associated with reduced and disrupted sleep patterns among adolescents (Bornhorst *et al*., 2015; Fobian, Avis & Schwebel, 2016).

The use of mobile based social media is a form of sedentary behavior that has increased considerably during last few years (Bucksch *et al*., 2016; Rideout *et al*,2010). Earlier investigations indicate that high consumption of electronic media is associated with several adverse outcomes, e.g., poorer physical health and fitness (Singh *et al*., 2008; Taehtinen *et al*., 2014), poorer mental health (Keane *et al*., 2017; Lacy *et al*., 2012), and poorer school performance (Busch *et al*., 2017; Sharif, Wills & Sargent, 2010; Johnson *et al*., 2007). Additionally, significant relations between longer screen times and lower physical activity has been found.

Earlier cross sectional studies indicate increase in use of social media by the adolescents that might have ignored their health and fitness and affected the academic performance. Interestingly, no investigation on the relationship with intensive usage of social media with health related physical fitness and academic performance is reported so far. Therefore, the aim of present study is to find out the usage of mobile based social media and its relation with health related physical fitness and academic performance in higher secondary school students.

1.1 Statement of problem

The time-duration that children spend using digital devices is increasing rapidly with the development of new portable and instantly accessible technology, such as smartphones and digital tablets. Furthermore,

with the dramatically rapid development of media games, learning packages, and educational applications for young children, opportunities for using mobile devices have been growing, students usage time has become increasingly longer, and child target users of mobile devices are becoming younger (Strasburger, Hogan, 2013; Strasburger, Jordan & Donnerstein, 2010; Vandewater *et al*., 2007). Therefore, the students get less time to participate in physical activities that may decline their health and fitness (Hallal *et al*., 2012). Though, earlier studies have shown that physical activity is associated with better physical health (Hills, King, & Armstrong, 2007; Janssen & Leblanc, 2010; Must & Tybor, 2005) and mental health (Lacy *et al*., 2012; Iannotti *et al*., 2009; Biddle & Asare, 2011), however, today most adolescent students extensively use social media that might have posed a great risk for physical fitness and consequently the academic performance too. Amidst the ongoing debate regarding use of mobile based social media by school students, there is still limited evidence to judge the influence of social media on health related physical fitness and academic performance. Therefore, the researcher has undertaken this study entitled "***Role of intensive usage of mobile based social media in health related physical fitness and academic performance among the higher secondary students***".

1.2 Problem & its relevance

Many digital devices which have evolved from personal desktops, such as notebook computers, tablets, and other mobile devices, have become ubiquitous in today's world. Smartphones, in particular, have brought many changes to our daily lives since they provide various functions including a camera, multimedia player, phone, internet browser, navigation system, e-mail, gaming device, and social net-working services (SNS) all in one portable device (Boulos, Wheeler, Tavares & Jones, 2011; Kim, Lee, Lee, Nam & Chung, 2014; Mok *et al*., 2014).

While smartphones have made life more convenient, it has also brought many side-effects (Kim *et al*., 2014). Kuss and Griffiths (2011)

reported that excessive smartphone use can decrease real-life social interaction, lower academic performance, and negatively affect relationships. Moreover, excessive smartphone use can give rise to adverse effects similar to those caused by problematic Internet use, including comorbid psychiatric disorders and the impairment of social and emotional functioning due to the portability factor that allows for real-time and personalized Internet services anywhere (Boulos *et al*., 2011; Ha *et al*., 2006; Shapira *et al*., 2003). Excessive smartphone use can also disrupt physical activity (Lepp, Barkley, Sanders, Re-bold & Gates, 2013). Specifically, high Internet and computer use, considered as sedentary behaviors, are associated with higher body mass index and lower physical activity levels (Kautiainen, Koivusilta, Lintonen, Virtanen & Rimpelä, 2005; Tammelin, Ekelund, Remes & Näyhä, 2007).

Moreover, students are one of the most important smart phone users of the virtual world and social networks. The overuse of social networks has positive and negative academic, social, and health consequences for the students (Jha *et al*. 2016). This may reduce health related fitness and academic performance. Literature suggests positive as well as negative impact of over use of social networking sites. Hence, the researcher of present study intends to see the impact of extensive use of social media with mobile phones on health-related physical fitness and academic performance especially amongst higher secondary school students from Nanded, Maharashtra.

1.3 Objectives of the Study

This study will be conducted with following objectives:

- To develop a questionnaire for the assessment of intensity of usage of social media with smart phone (mobile phone) among the students.

- To see the relationship between time spent on social media and health related physical fitness of higher secondary school students.
- To see the relationship between use of social media and academic performance of higher secondary school students.
- To predict the status of health related physical fitness and academic performance on the basis of the intensity of usage of social media (by using smart phones).

1.4 Limitations of the Study

- Although a questionnaire will be developed and standardized in this investigation, the intra-individual variation in human may divert the result of some test items.
- The psychological condition in human may vary from time to time according to the situation that may be considered as one of the limitations.
- The respondents may feel boredom due to length of questions in the questionnaire.

1.5 Delimitation of the Study

The study is focused on use of mobile based use of social media in higher secondary school students and its impact on health related physical fitness and academic performance. The study will be delimited to the students of higher secondary school students from Nanded district.

2.0 METHODOLOGY

This is a developmental cum survey study. This investigation will be conducted in two phases. During **first phase**, a new questionnaire on “social media” will be developed for higher secondary school students by using

standard procedure (Bera, 1993). For this, the investigator will review the literature on social media and its impact as well as consequences. Based on these reviews, some related dimensions, that represent the status of social media, will be decided and related items (questions) will be formulated in consultation with research guide. The newly formed questions will be sent to some experts and accordingly the preliminary form of the questionnaire will be constructed. Further, first try-out on small sample will be conducted and difficulty faced to understand each question by the students will be recorded. This will help to modify the questionnaire. Then the questionnaire will be administered on a large sample (about 3000 students). Gradually, the reliability and validity of the questionnaire will be determined and norms will be established. The **second phase** of this investigation will be a survey study. Minimum six hundred higher secondary school students (male & female), age range: 17-18 years, will participate as the sample of this study (n= minimum 600; male=300 and female=300). Stratified random sampling technique will be considered to select the sample. They will be administered with the questionnaire on “social media” and “AAHPERD’s health related physical fitness test”, whereas “academic performance” of each student will be gathered on the basis of the score achieved in the school examination.

2.1 Participants and procedure

Minimum three hundred higher secondary school students (male & female), age range: 17-18 yrs) from different schools located in Nanded city (Maharashtra) will be recruited for this study. The researcher will identify the higher secondary schools located in the geographical area of Nanded city and will approach the Principal, school management and parents about the importance of the present investigation and its impact in the society. After receiving permission, the researcher will take the written consent from the students / guardian. Then the structured questionnaire will be administered exclusively on the higher secondary school students in a classroom situation to collect data on intensity of usage of social media by using smart phones. Further, status of health related physical fitness among the mobile users will

be assessed by using standard tests (AAHPERD, 1986). Academic performance of the participants will be recorded by using the grades/marks achieved by the participants based on school records.

2.2 Variables and tools

Health related physical fitness

- Cardiorespiratory endurance : 1 mile run/walk (mins/ secs).
- Flexibility: Sit & reach test (No./min)
- Abdominal muscles strength: Sit up (No./min)
- Body fat : Body fat monitor (%).

Academic performance:

Grades/marks obtained in the school examination being conducted by the schools.

2.3 Statistical procedures

For developing the questionnaire on “social media”, the data obtained will be analysed using binomial theory of normal probability. Further, test-retest reliability, validity, factor analysis (using Centroid Matrix) and percentile norms will be employed to standardize the newly developed questionnaire on “social media”.

The survey data on usage of “social media” (by using smart phones), “health related physical fitness” and “academic performance” will be processed for descriptive statistics. Further, the scores of each test will be correlated by employing Pearson’s product moment method. Then Multiple step up regression statistics will be employed to predict the status of “health related physical fitness” and “academic performance” of the students based on the scores of “usage of social media”.

3.0 REQUIREMENTS

To conduct, this investigation, the researcher is aware of the following requirements:

3.1 Instrument / Tools

The researcher will develop a questionnaire on “social media” of extensive usage of mobile phone (smart phone) by higher secondary school students. Further, the tools to measure “health related physical fitness” and “academic performance” are available with the researcher.

3.2 Finance

The researcher will meet the expenses to distribute questionnaire, travelling, statistical analysis and also for collection of the tools for measuring health related fitness and academic performance.

4.0 TENTATIVE SCHEDULE TO COMPLETE THE RESEARCH

Works to be done	**Duration**
Development of questionnaire on “Usage of smart mobile phone-based social media”	7 months
Contact with selected schools (Principals / management) and guardians	2 months
Printing of materials and availability of finance	2 months
Data collection at different schools in Nanded (Maharashtra)	12 months
Data organization and statistical analysis	2 months
Report writing	5 months
TOTAL	**30 months**

5.0 REPORT WRITING

After completion of data collection and statistical analysis, the researcher will write the report in consultation of the research guide. The report of research will contain the following chapters:

- Introduction (Chapter-I)
- Review of related literature (Chapter-II)
- Methodology (Chapter-III)
- Results and Discussion (Chapter-IV)
- Summary, Conclusion and Recommendation (Chapter-V)
- Bibliography and Appendices

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